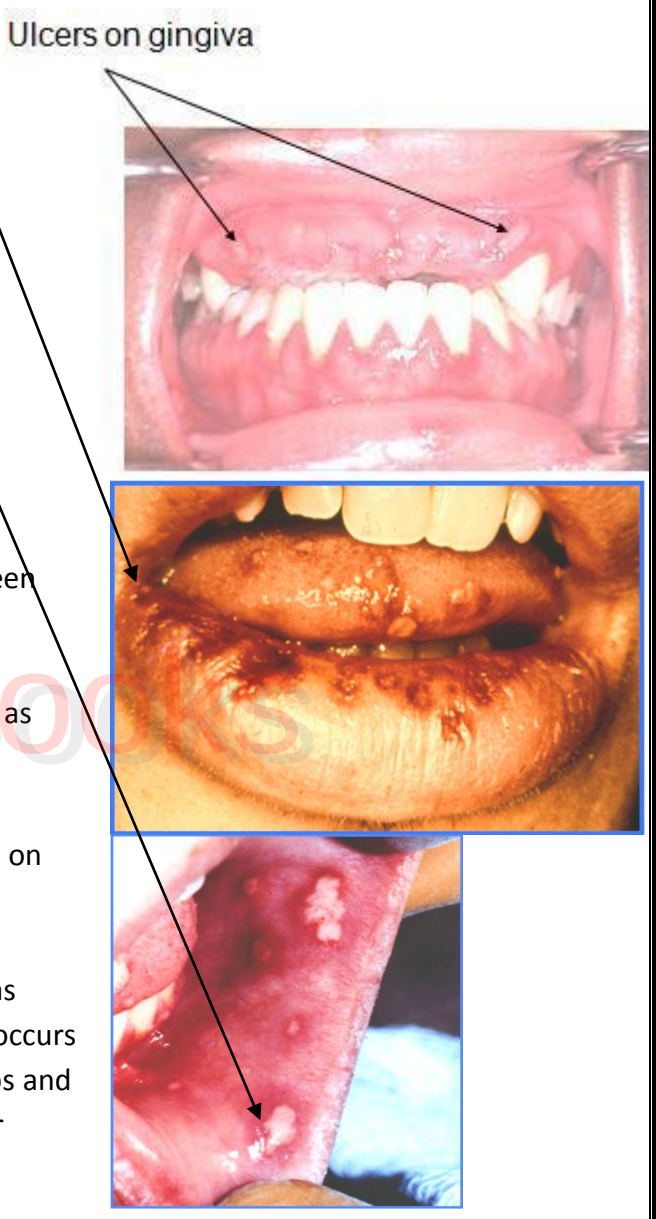
LAB : Oral Infections

❖ *Primary Herpetic Gingivostomatitis* :

- Gingival ulcers
- On the lips : Mild *crusting* & small rounded ulcers discrete (separated from each other)
- Ulcers on *Dorsum of the tongue* (keratinized mucosa) and these ulcers are small (around 3mm in diameter) sometimes there *Coalescence* of these ulcers but usually it separated,
  and sometimes vesicles can be seen

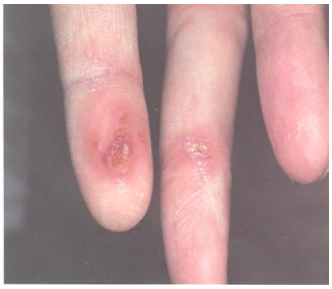


☒ Why we didn't make our diagnosis as *Secondary* or *Recurrent Herpetic Gingivostomatitis* ?

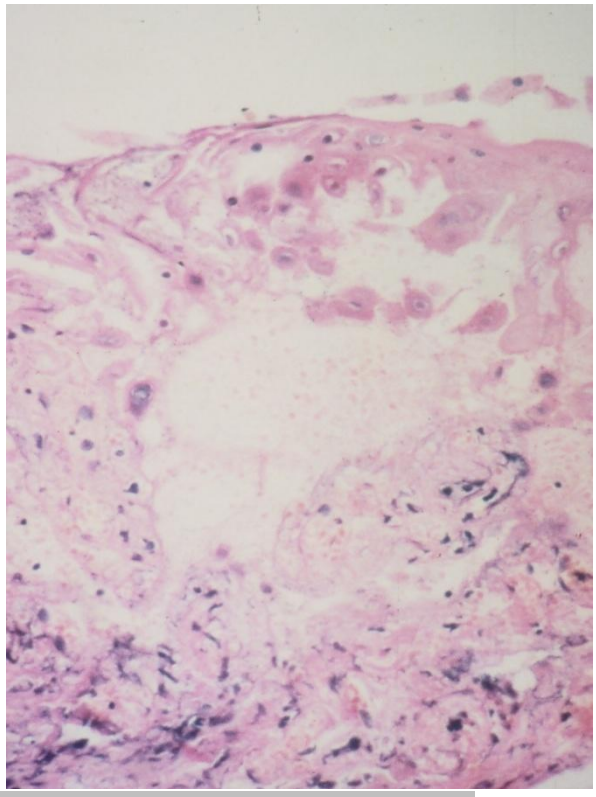
Reoccurrence intraoral lesions are on

- ✓ *hard palate*
- ✓ *Gingiva*
- ✓ And extra orally are occur as *Recurrent Herpes Labials* (occurs on the vermilion zone of lips and adjacent skin on the border between them .. usually Unilateral)

So in *Primary Herpetic Gingivostomatitis* we find :
***Ulcers* on both Keratinized & Non-Keratinized oral mucosa**
Intraoral or Extraoral on the lips



- *Herpetic Whitlow :*
  - Small vesicles (1-2 mm in diameter)
  - Coalescence of ulcers of crusting due to rupture of vesicles giving hard or scaly material (exudates→ dryness →become hard)
  - It is very painful unlike recurrent intraoral Herpes infection which is painless
  - Occurs mainly in young children



- Histological :
  - *Multinucleated Epithelial Giant Cells* (epithelial in origin)
  - *Tzank Cells* "Balloon Degeneration " : which is swollen cell with *eosinophilic* cytoplasm and large pale *basophilic* nuclei with fragmentation of chromatin
  - *Intraepithelial blister/vesicle* results from rupture of virally infected epithelial cells

Note

Vesicles are 2 types :

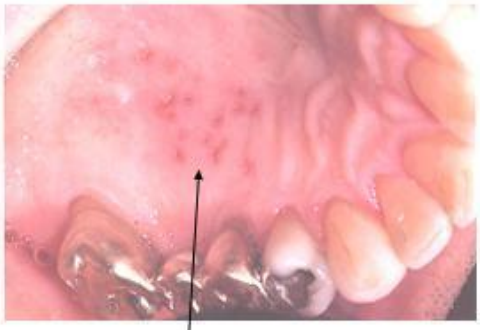
Subepithelial Vesicles : accumulation of fluid beneath stratum basale , so that all layers of epithelium raise

Intraepithelial Vesicles : accumulation of fluid within epithelial layer usually stratum spinosum

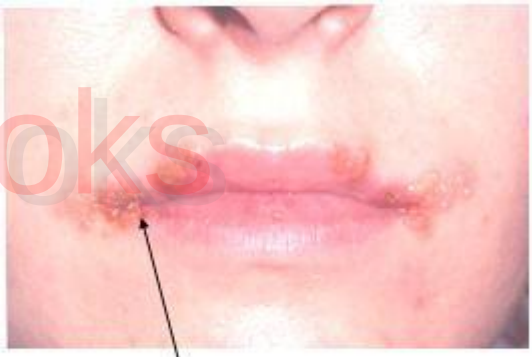
In *Vesiculobullous skin diseases* , we have Subepithelial blistering & intraepithelial vesicles.. ***BUT*** … in *Herpetic infection* we have Intraepithelial vesicle formation "spaces"

❖ *Recurrent Herpes Infection :*

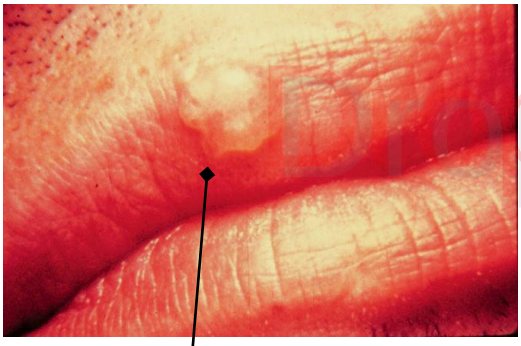
- Intraorally :
  - ✓ Unilateral Ulcers (ruptured vesicles) on the palate
  - ✓ Pinpointed
  - ✓ Painless (slightly annoying to the patient but not painful)
- Extraorally :
  - ✓ Vesicles
  - ✓ Usually unilateral "here bilateral "
  - ✓ Called *Herpes Labials*
  - ✓ Best locations vermilion border junction with skin
  - ✓ Other locations : *Philtrum*



Small pinpointed vesicles/ulcers



Vesicles at vermilion border, junction with skin

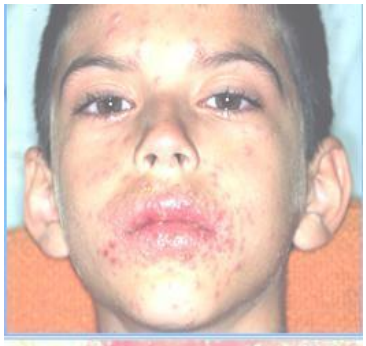


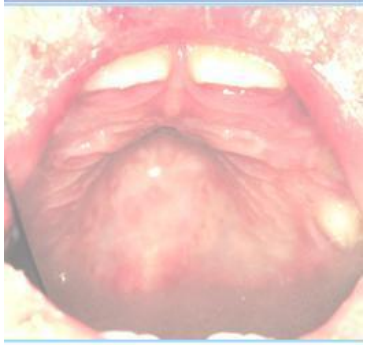
Here unilateral lesion , with coalescence of vesicles forming a big one , it is fluid filled ,later on it will rupture and then there will be crusting with dried material (10-14 days) then healing

We can manage this lesion by applying <u>*Acyclovir*</u> as a cream five times daily on the tingling area , As patient feels <u>*Prodromal symptoms* before eruption of vesicles.</u>

Another way which is effective too .. is applying <u>Ice</u> or wiping the area by <u>Alcohol</u> so disrupt the environment for virus

❖ *Chicken pox :*

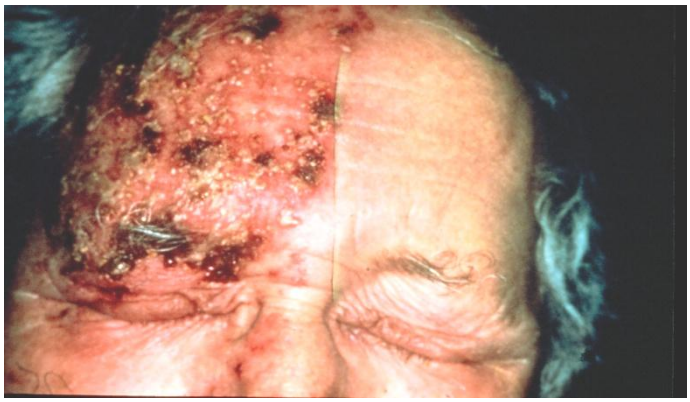


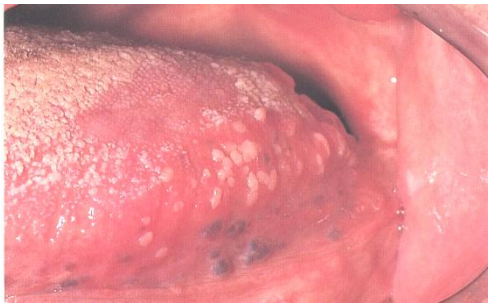


- Differential diagnosis :
  - *Primary Herpes infection*
  - *Primary Cytomegalovirus infection*
- To decide that it is Primary Chicken Pox , look at forehead there is a lot of vesicles & and you can check the abdomen and the trunk too , and see the vesicles there .
- Histological : same features of *Herpes Simplex*

❖ *Shingles* "Recurrence of chicken Pox " :

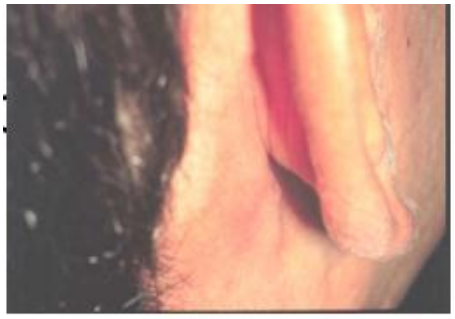
- ***Unilateral*** ☼
- The most common branch of trigeminal nerve that is involved is the *Ophthalmic branch*
- Occurs Intraorally as extraorally
- Secondary infection can occur



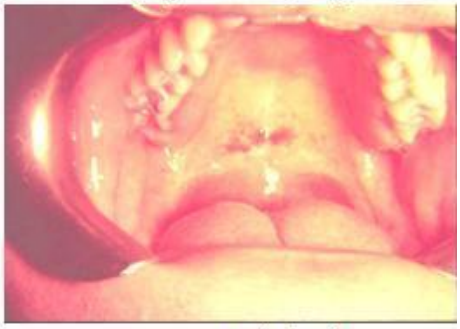


❖ *Infectious Mononucleosis (Glandular Fever)*:

- Pain in tonsils , pharynx and swollen cervical lymph nodes (*Postauricular lymph node*)
- *Petechial hemorrhages* located on the soft palate
- If you give him *amoxicillin* or *ampicillin* as antibiotic , he will get skin rash
- Blood test shows atypical lymphocytes appearance
- The causative agents is : ***EBV***



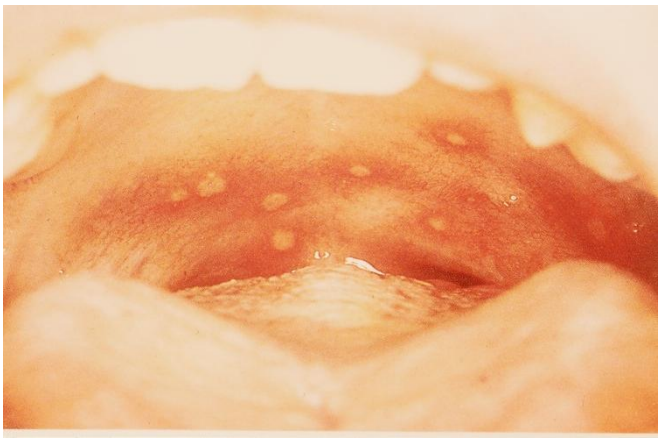
lymphadenopathy



petechei

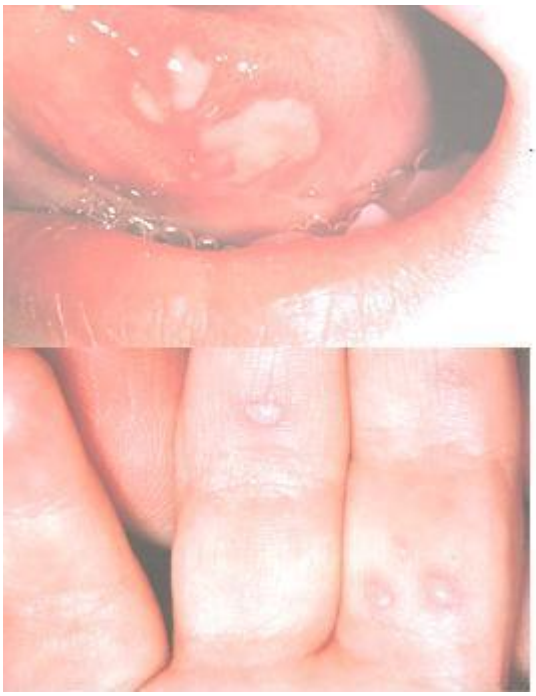
❖ *Herpangina :*

- Vesicles on soft palate but not on tonsils
- No acute symptoms like *Lymphadenopathy* or Fatigue , Malaise, Fever, *Dysphagia*
- Mild pain and discomfort

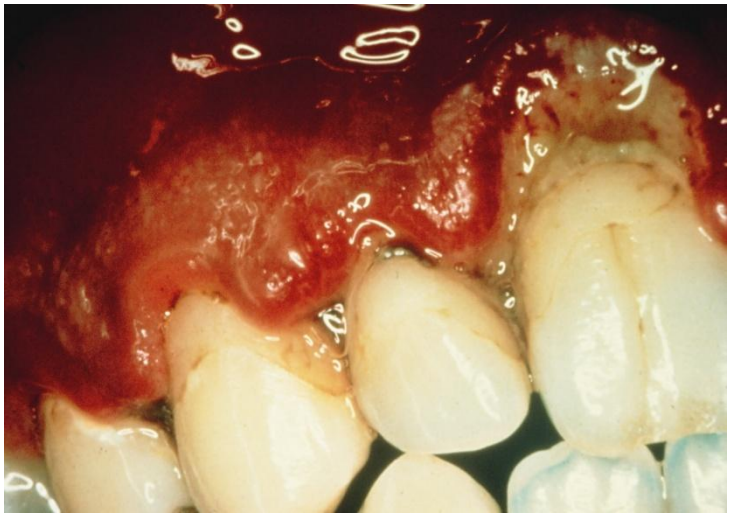


❖ *Hand foot mouth disease*

- *Coxsackie Virus Group A - type 16 (CA 16)*

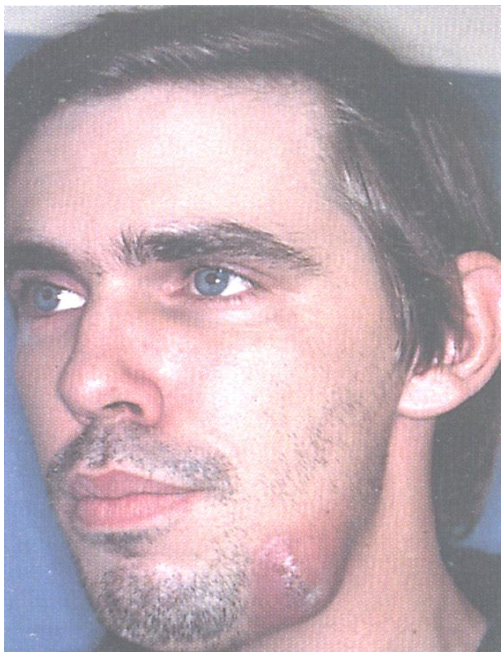


❖ *ANUG :*



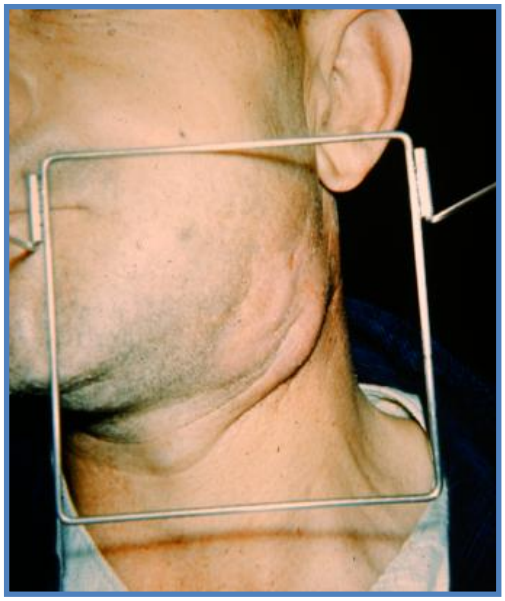
- The target area is the *InterDental Papilla* & *Marginal Gingiva* , usually attached gingiva not involved
- Grayish-Green pseudomembrane that contains necrotic tissues , debris and bacterial products
- Severely painful , distressing to the patient , Halitosis, lymphadenopathy ,a lot of salivation will associated with this lesion
- The causative agent : ***Fusospirochetal complex*** (opportunistic bacteria normally presenting in the oral cavity)
- Predisposing factors :
  - ✓ Sever stress
  - ✓ Immunocompromised
  - ✓ Smoking
  - ✓ Poor nutrition
  - The persisting of these predisposing factors will lead to recur

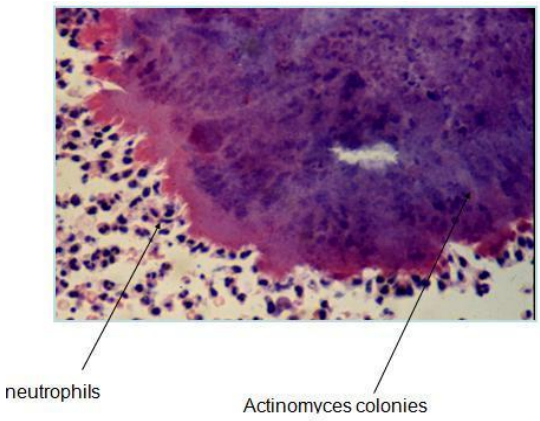
❖ *Actinomycosis*

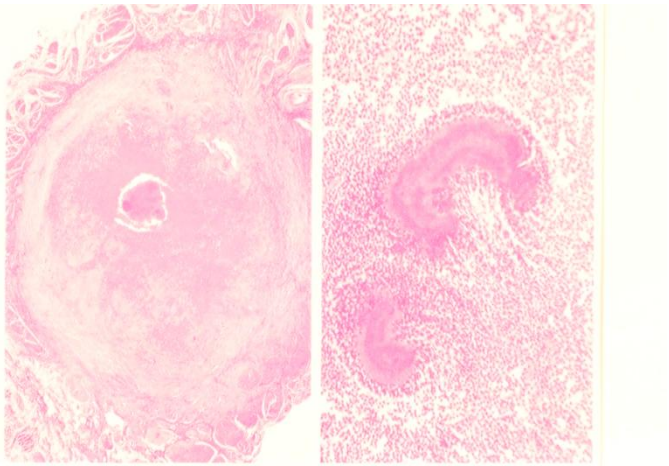


- Submandibular infection , nodule (hard in palpation) , induration with central necrosis and pus formation
- *Granulomatous inflammation* (sheets of *Histiocytes* and *macrophages*)
- Another case : *Multiple nodules* and without *sinuses* opened on the skin , if you squeeze this lesion , you will have *sulphur granules* which is the bacterial colonies which are calcified .
- Histologically: calcified bacterial colony associated with small colonies and neutrophils surrounding them
- Treatment :
  - ✓ Long term high dose antibiotics

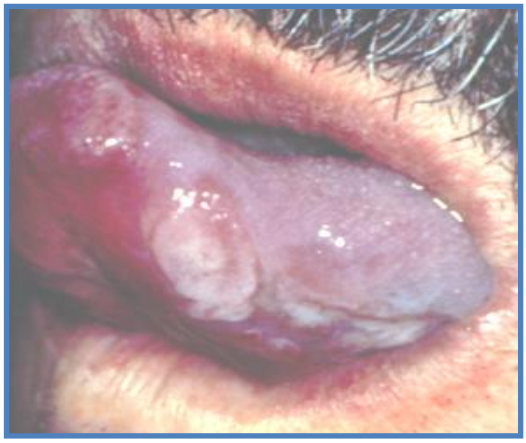
    Penicillin or *tetracycline*







❖ *Syphilis :*



- *Primary (chancre) :*
  - Ulcer at primary site of infection
  - Highly contagious
  - Heal and reoccur as , mucous patch with skin rash
  - Granulomatous inflammation : hard indurated lesion)
- *Secondary :*
  - Skin rash & mucous patches that will coalescence and form Snail Track Ulcer (long area of ulceration)
- *Tertiary :*
  - Gumma :necrosis – Type IV Hypersensitivity
  - Area of Atrophic glossitis
  - Area of Leukoplakia (Premalignant) ⟶ high tendency to transform to SCC
- *Congenital :*

❖ Hutchinson triad :

☝. Blindness

✌. Deafness

👌. Dental Anomalies

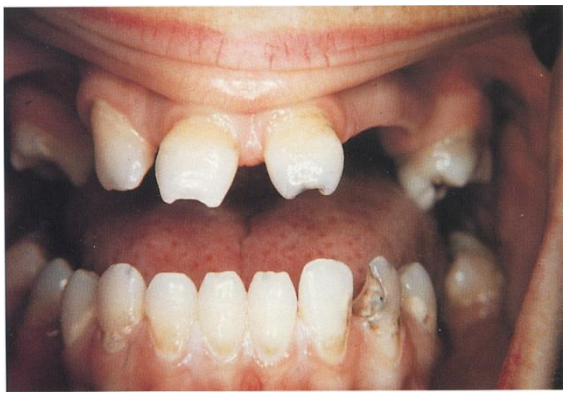
❖ Dental Anomalies :

☹. Notched Incisors & tapered

☹. Peg Laterals

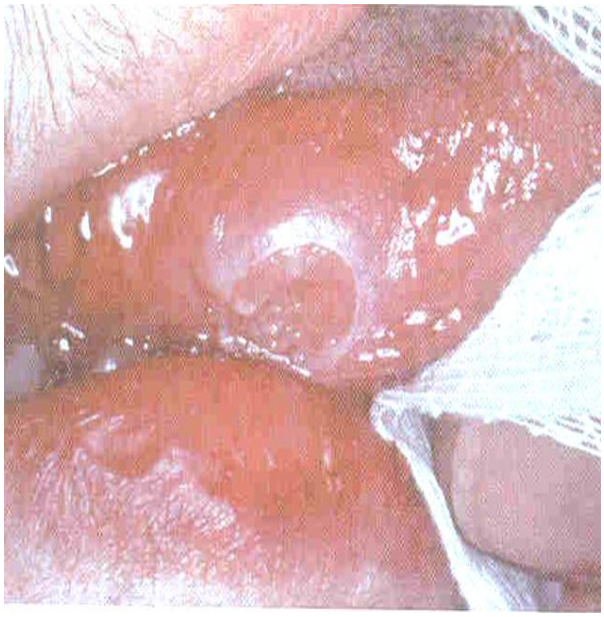
☹. Mulberry Molars

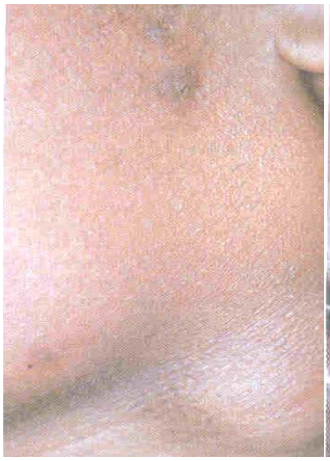
with globular masses of hard tissue on occlusal surfaces

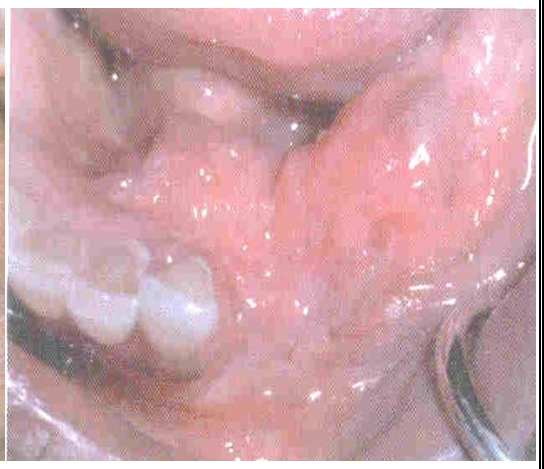


❖ *Tuberculosis (TB) :*

- Granulomatous Inflammation
- Ulcers located on the tongue , may be *primary* or *secondary* (after coughing of sputum)
- Threshold of pain differ between patients
- Exophytic irregular area of gingival
- *Lymphadenopathy*





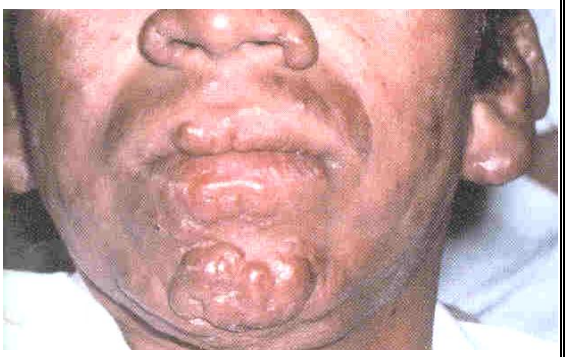


❖ *Leprosy :*

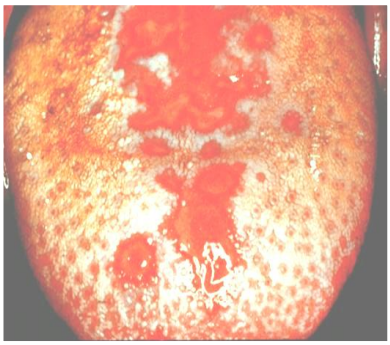
- 2 Types :

➢ *Lepromatous* : spread and reach oral cavity

➢ *Tuberculoid*



❖ *Gonorrhoea :*



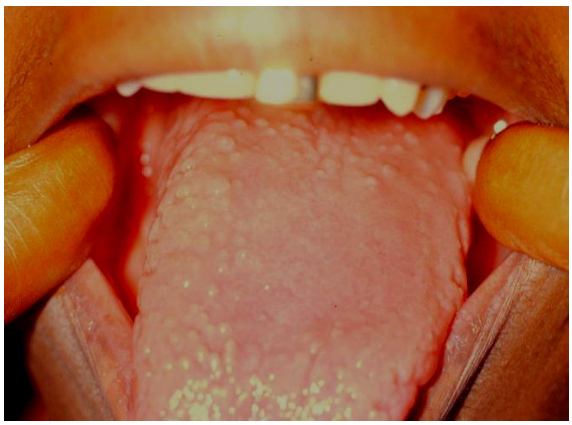
- *Neisseria gonorrhea*
- Mainly tonsillar and soft palatal lesions
- *Erythema*, vesicles, ulcers, pain
- It is more in the <u>posterior part on tonsils and soft palate</u>
- mostly in sexually active adults.
- Lesions reported from all areas of the mucosa.
- Usually painful

❖ *Acute Pseudomembranous Candidosis (Thrush):*

- Thick white coating *(Pseudomembrane*) present on Oral mucosa
- <u>Can be removed by scraping</u>
- Painful & bleeding
- <u>May be Chronic with immunocompromised patients</u> and doesn't respond to medications and last for months or weeks
- Histological (<u>*PAS stain*</u>) : contains *Hyphae*

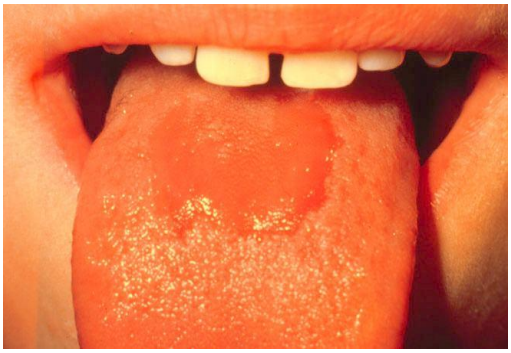
❖ *Acute Erythematous (Atrophic) Candidosis*

- Patient's medical history : Prolonged corticosteroids or broad-spectrum antibiotic
- Red and painful
- it is called also (*antibiotic sore tongue*)



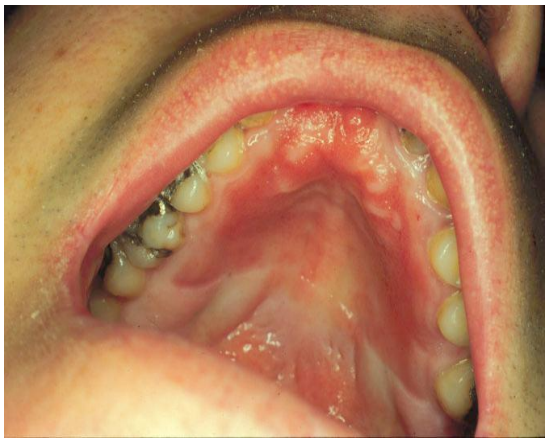
❖ *Median Rhomboid glossitis :*

- Painless
- Candida-associated lesion
- Here it is wider than ordinary cases



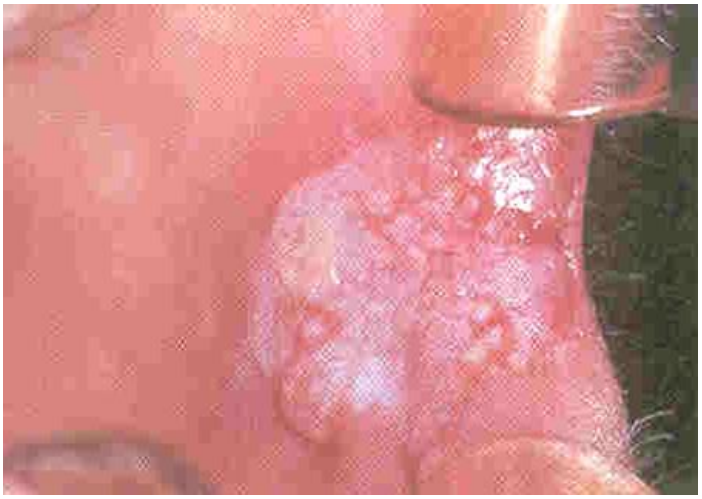
❖ *Candida-associated denture stomatitis:*

- Occurring on Hard Palate (Maxilla)
- Predisposing Factors :
  - ✓ Rocking denture
  - ✓ Poor Denture Hygiene
  - ✓ Continues wearing of the denture
- Redness
- No hyphae within the smear (as hyphae is on denture surface)

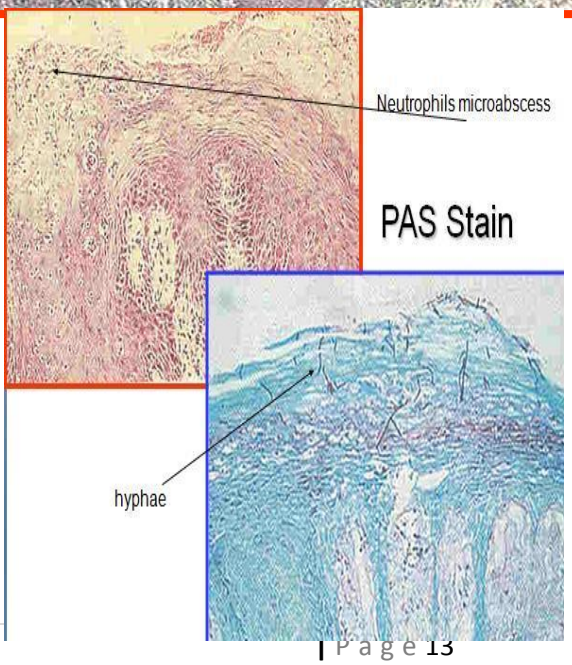


❖ *Chronic Hyperplastic Candidosis (Candidal Leukoplakia):*

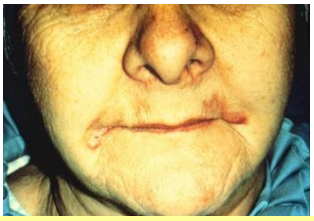
- Upon scraping the lesion <u>didn't wipe off</u>
- Heavy smoker
- Associated with *Angular Cheilitis*
- Have also cracks or fissures on angle of the mouth
- Differential diagnosis :
  - Keratosis
  - Hyperplasia of epithelium

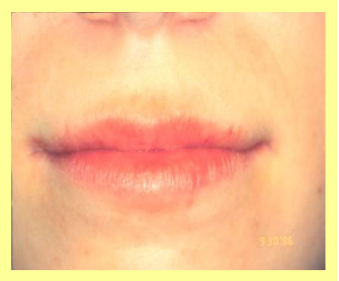


- Histologically :
  - ✓ Full thickness epithelium which is *hyperplastic* and *hyperkeratotic* in some areas
  - ✓ PAS stain : shows *hypae*



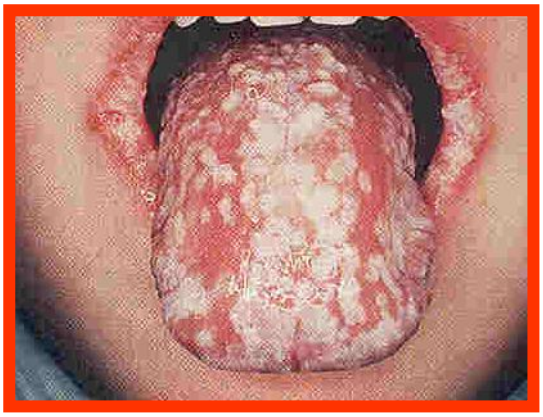
❖ *Angular Cheilitis :*



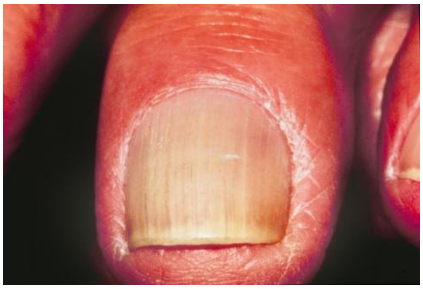


- Fissures , Redness on the angles of the mouth
- Anemic patients or B12 deficiency
- In denture wearing patients there will be <u>decreased in vertical dimension</u>
- May be fungal or bacterial *(Candida or Staph aureus or Streptoccocci)*
- Clinical term (extraorally)

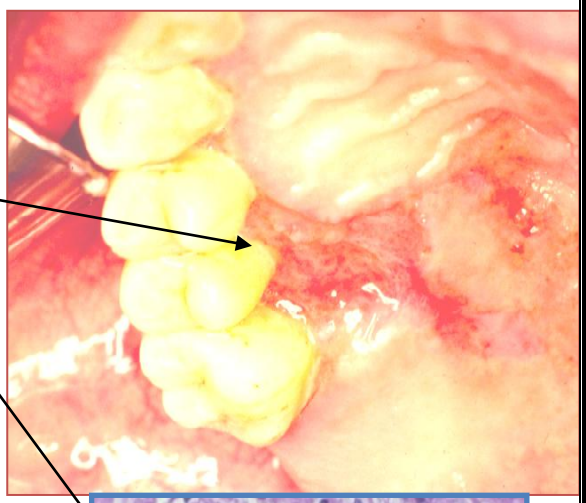
❖ *Chronic mucocutanous candidosis:*



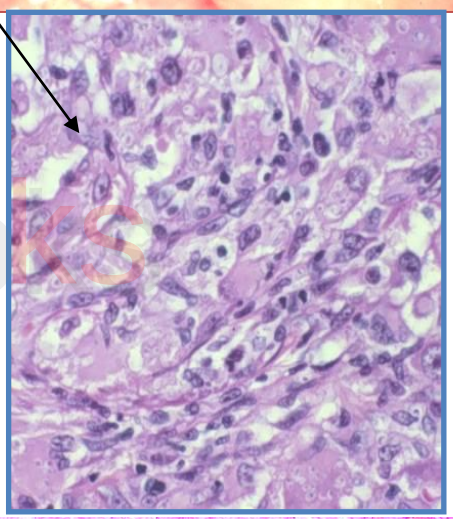
- Nail , skin & intraoral infections
- <u>Multifocal intraorally</u> and usually it looks like hyperplastic candidosis
- <u>Usually associated with immune system diseases</u>

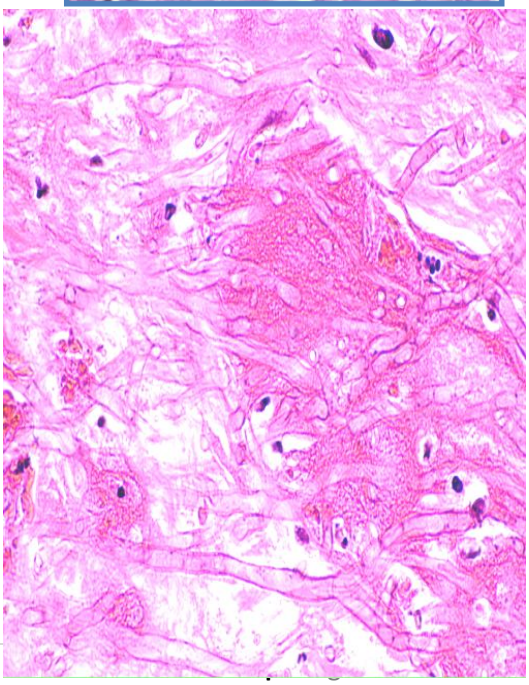


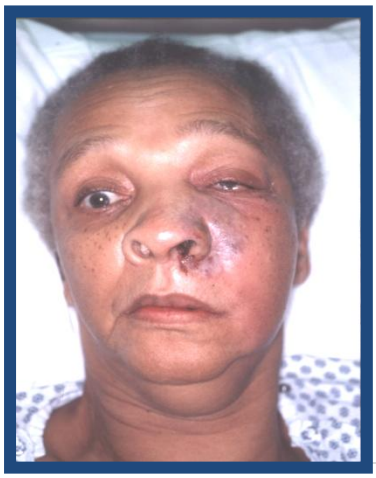
❖ *Blastomycosis ,Histoplasmosis & Zygomycosis "Deep fungal infections":*



- Why it is not recurrent Herpes ?
  - ✓ Not Pinpointed
- Why it is granulomatous inflammation ?
  - ✓ There is sheets of macrophages .. but mixed with lymphocyte actually
- *PAS stain* : long *hyphae* which will occlude blood vessels causing shortage in blood supply from distance areas leading to necrosis in the brain , the eye , and where and when necrosis occurred anti-fungal will not affect those areas .. and the only management is curettage those areas then using the antifungal

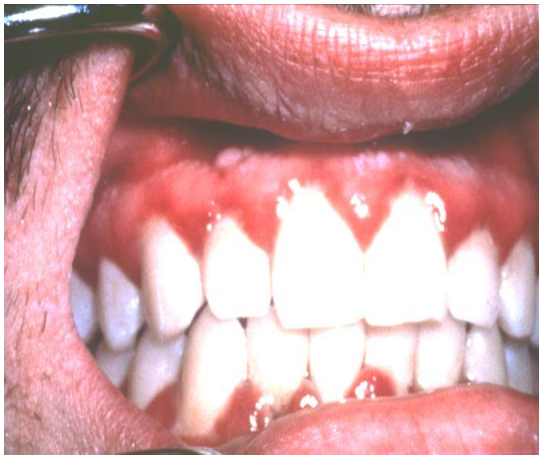




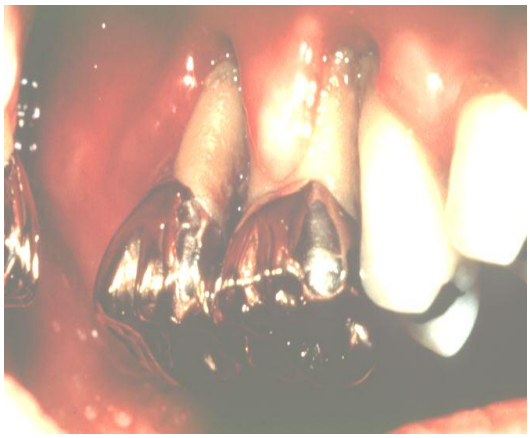


❖ *HIV infection and AIDS :*

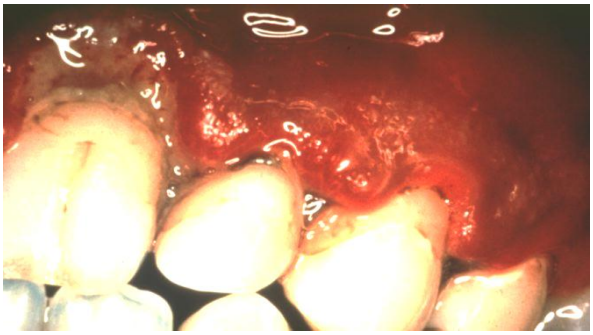
- Manifestations of AIDS
- *linear gingival erythema:*
  - Not due to plaque accumulation or poor oral hygiene but due to allergy to *C. albicans*



- *Necrotizing Ulcerative Periodontitis:*
  - Necrosis and bone loss at localized area



- *Acute Necrotizing Ulcerative Gingivitis:*

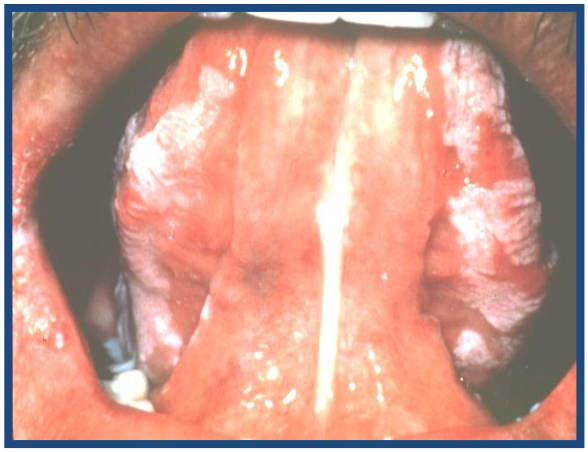


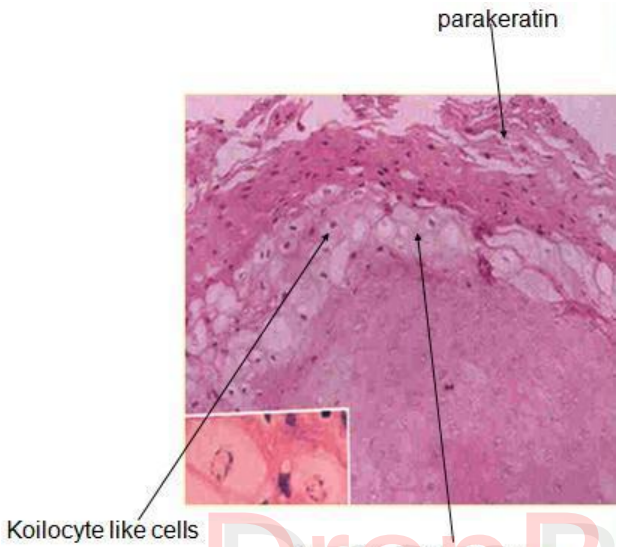
- *Hairy Leukoplakia:*

  ⊙.White areas on lateral border of the tongue , those white areas can be vertical or homogenous

  ⊙.It is not a premalignant lesion

  ⊙.*Koilocyte <u>like</u> cells*





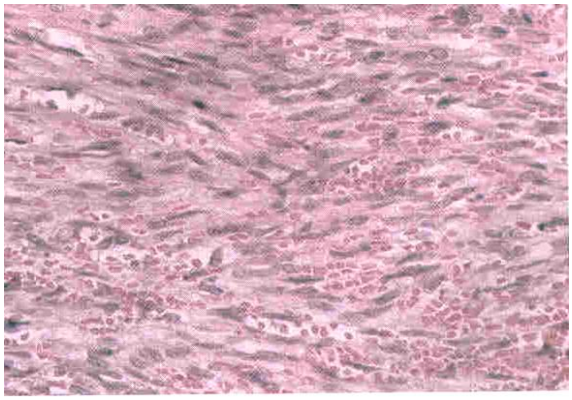
A *Koilocyte* is a squamous epithelial cell that has undergone a number of structural changes, which occur as a result of infection of the cell by human *papillomavirus.(Verruca Vulgaris)*

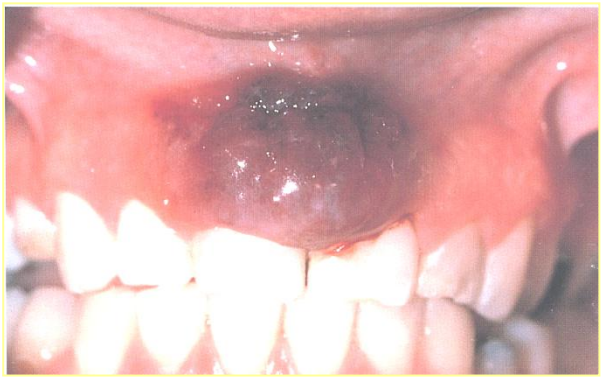
➢ *Kaposi's Sarcoma* :

۞.<u>Malignant tumour</u> of endothelial cells

۞.Showing as plaques or nodules

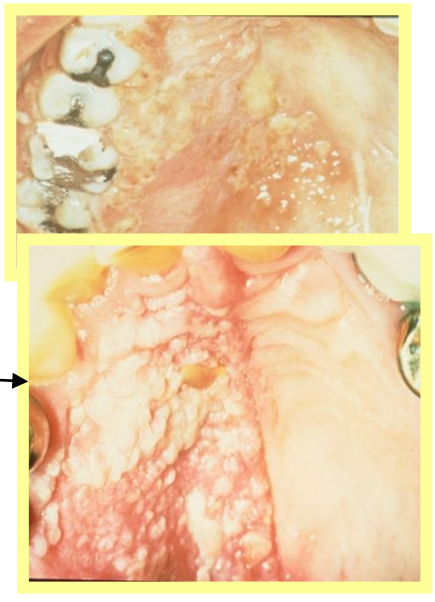
۞.<u>The most common malignancy</u> in AIDS patient (malignant endothelial cells among them RBCs in *Slit-like vessels* or clift like vascular spaces





➢ *HIV associated HSV infection* :

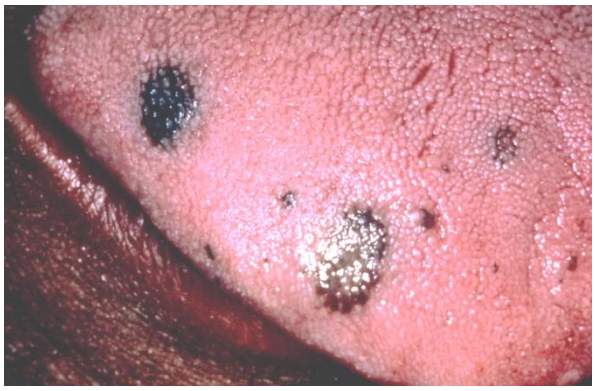
- Extensive palatal ulceration
- Unilateral
- It is Recurrent Herpes simplex <u>even if it is not</u> *Pinpointed*
- Differantail Diagnosis :
  - Shingles
  - CMV infection (but usually here there will be BIG ulcer than this)



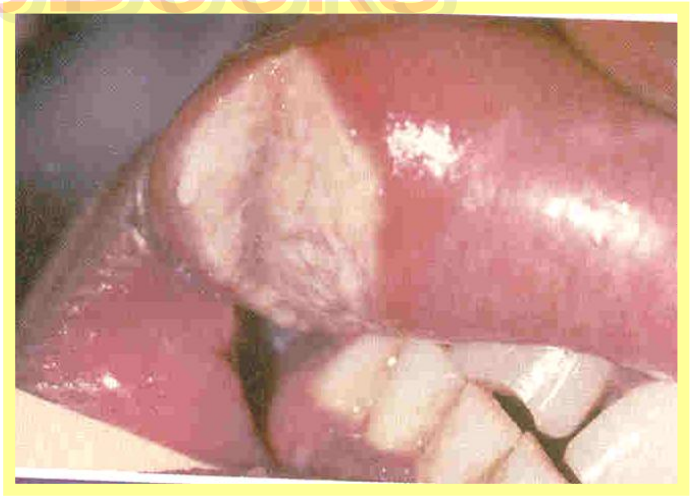
Note

All the features in AIDS patient consider it Atypical

- *Thrombocytopenic Purpura:*
  - Bleeding due to decrease of the number of platelets
  - There *autoimmune response* in ADIS patients against platelets



- *HIV oral ulceration: (Non-specific ulcer)*
  - Differantial Diagnosis
    - CMV
    - Reccurent Aphthous ulceration (Aphthous-like ulcers)
    - Deep fungal infections
    - TB



Done By:

HeRoN